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What is claimed is:

1. A fault condition monitoring apparatus for use with a fuse cutout, the apparatus comprising:

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a housing operable to be supported by the fuse cutout, said housing having first and second contacts operable to make electrical contact with fuse contacts on said fuse cutout when said housing is supported by said fuse cutout;

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a current sensor inside said housing and connected to said first and second contacts; and

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a signaling device coupled to said current sensor and operable to cause a signal to be produced when current sensed by said current sensor meets a criterion.

2. The apparatus as claimed in claim 1 wherein said housing has a profile of a fuse operable to be held by the fuse cutout.

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3. The apparatus as claimed in claim 1 wherein said housing has first and second opposite ends and said first and second contacts are on said first and second opposite ends.

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4. The apparatus as claimed in claim 1 wherein said first and second contacts are operable to mechanically mate with said fuse contacts on the fuse cutout.

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5. The apparatus as claimed in claim 1 wherein said first and second contacts are operable to mechanically mate with line connectors on the fuse cutout.

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6. The apparatus as claimed in claim 1 wherein said first and second contacts include first and second supports respectively, said first and second supports being operable to cooperate with respective line connectors on the fuse cutout to support said housing.
7. The apparatus as claimed in claim 1 wherein at least one of said first and second contacts includes a pull-ring.
8. The apparatus as claimed in claim 1 wherein said current sensor includes a voltage divider connected between said first and second contacts.
9. The apparatus as claimed in claim 8 wherein said voltage divider includes a capacitor network.
10. The apparatus of claim 1 wherein said signaling device includes a visual indicator operable to produce a visual signal operable to be seen from outside said housing.
11. The apparatus of claim 10 wherein said visual indicator includes a light emitting device.
12. The apparatus of claim 11 further comprising a transparent cover disposed at an end of said housing, for covering said light emitting device, while permitting light from said light emitting device to be viewed through said transparent cover.
13. The apparatus of claim 1 wherein said signaling device includes an audible indicator operable to produce an audible signal.

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14. The apparatus of claim 1 wherein said signaling device includes a transmitter operable to produce a control signal for reception by a remotely located annunciator.

5 15. The apparatus of claim 14 further comprising a remotely located annunciator for receiving said control signal from said signaling device.

16. The apparatus of claim 15 wherein said remotely controlled annunciator includes at least one of an audio and visual indicator.

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17. A method of monitoring for a fault condition in a system comprising a fuse cutout connected between a supply conductor and an electrical device, the method comprising:

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connecting to the fuse cutout a housing containing a current sensor, such that the current sensor is electrically connected to fuse contacts on said fuse cutout; and

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actuating a signaling device when current sensed by said current sensor meets a criterion.

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18. An apparatus for monitoring for a fault condition in a system comprising a supply conductor and an electrical device, the apparatus comprising the fault condition monitoring apparatus of claim 1 and further comprising a fuse cutout having fuse contacts connected between the supply conductor and the electrical device.

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19. The apparatus of claim 18 further comprising a fuse connected between said fuse contacts.

20. A fuse cutout apparatus comprising:

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an insulator;

first and second fuse contacts on opposite ends of said insulator respectively, for holding a fuse;

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a current sensor inside said insulator and connected to said first and second fuse contacts; and

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a signaling device coupled to said current sensor and operable to cause a signal to be produced when current sensed by said current sensor meets a criterion.

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21. The apparatus as claimed in claim 20 wherein said current sensor includes a voltage divider connected between said first and second contacts.

22. The apparatus as claimed in claim 21 wherein said voltage divider includes a capacitor network.

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23. The apparatus of claim 20 wherein said signaling device includes a visual indicator operable to produce a visual signal operable to be seen from outside said insulator.

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24. The apparatus of claim 23 wherein said visual indicator includes a light emitting device.

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25. The apparatus of claim 24 further comprising a transparent cover disposed at an end of said insulator, for covering said light emitting device, while permitting light from said light emitting device to be viewed through said transparent cover.

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26. The apparatus of claim 20 wherein said signaling device includes an audible indicator operable to produce an audible signal.

27. The apparatus of claim 20 wherein said signaling device includes a transmitter operable to produce a control signal for reception by a remotely located annunciator.

28. The apparatus of claim 27 further comprising a remotely located annunciator for receiving said control signal from said signaling device.

29. The apparatus of claim 28 wherein said remotely controlled annunciator includes at least one of an audio and visual indicator.

30. The apparatus of claim 20 further comprising a fuse connected between said fuse contacts.

31. A method of monitoring for a fault condition in a system comprising a supply conductor and an electrical device, the method comprising:

connecting, between said supply conductor and said electrical device, a fuse cutout having fuse contacts, an insulator and a current sensing circuit connected between said fuse contacts and located inside said insulator; and

actuating a signaling device coupled to said current sensing device when current sensed by said current sensing circuit meets a criterion.

32. A fault condition monitoring apparatus for use with a fuse cutout, the apparatus comprising:

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a housing operable to be supported by the fuse cutout, said housing having first and second contacts operable to make electrical contact with fuse contacts on said fuse cutout when said housing is supported by said fuse cutout;

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current sensing means inside said housing and connected to said first and second contacts for sensing current between said first and second contacts; and

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signaling means coupled to said current sensor, for causing a signal to be produced when current sensed by said current sensing means meets a criterion.

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33. The apparatus as claimed in claim 32, wherein said current sensing means includes a voltage divider connected between said first and second contacts.

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34. The apparatus of claim 32 wherein said signaling means includes visual indicating means operable to produce a visual signal operable to be seen from outside said housing.

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35. The apparatus of claim 34 wherein said visual indicating means includes a light emitting device.

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36. The apparatus of claim 32 wherein said signaling means includes audible indication means for producing an audible signal.

37. The apparatus of claim 32 wherein said signaling means includes transmitting means operable to produce a control signal for reception by a remotely located annunciator.

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38. The apparatus of claim 37 further comprising remotely located annunciation means for receiving said control signal from said signaling means.

5 39. A fuse cutout apparatus comprising:

an insulator;

10 means for holding a fuse, including first and second fuse contacts on opposite ends of said insulator respectively;

current sensing means inside said insulator and connected to said first and second fuse contacts for sensing current between said first and second contacts; and

15 signaling means coupled to said current sensor for causing a signal to be produced when current sensed by said current sensing means meets a criterion.

20 40. The apparatus as claimed in claim 39 wherein said current sensing means includes a voltage divider connected between said first and second contacts.

25 41. The apparatus of claim 39 wherein said signaling means includes visual indicating means operable to produce a visual signal operable to be seen from outside said insulator.

42. The apparatus of claim 41 wherein said visual indicating means includes a light emitting device.

30 43. The apparatus of claim 39 wher in said signaling means includes audible indication means for producing an audible signal.

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44. The apparatus of claim **39** wherein said signaling means includes transmitting means operable to produce a control signal for reception by a remotely located annunciator.

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45. The apparatus of claim **44** further comprising remotely located annunciation means for receiving said control signal from said signaling means

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